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Agricultural Extractivism, Border and Migrant Workforce: The Expansion of Pineapple Monoculture in Costa Rica

Extractivismo agrícola, frontera y fuerza de trabajo migrante: La expansión del monocultivo de piña en Costa Rica

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ABSTRACT

Since the 1980s, Costa Rica has been promoting intensive pineapple cultivation mainly in the northern border area with Nicaragua. This article seeks to study the relationship that exists between agricultural extractivism as a development model, global agrifood chains and border regions as "spaces of opportunity" due to their peripheral situation, the presence of natural resources, flexible and cheap labor force originating in this case from Nicaragua. We will demonstrate how this type of productive activity generates territories of border dispossession in which the relations of spatially anchored domination are materialized, such as the accumulation of land, bad working conditions, the exploitation of irregular migrant labor and environmental pollution.

Keywords: 1. Border region, 2. monocultures, 3. migration, 4. Costa Rica, 5. Central America.

RESUMEN

Desde la década de los años ochenta, Costa Rica ha promovido el cultivo de piña de forma intensiva, mayoritariamente en la Zona Norte fronteriza con Nicaragua. El presente artículo estudia la relación que existe entre el extractivismo agrícola como modelo de desarrollo, las cadenas agroalimentarias globales y las regiones fronterizas como "espacios de oportunidad" debido a su situación periférica, así como su relación con la presencia de recursos naturales y de fuerza de trabajo flexible y barata originaria de Nicaragua. Demostramos cómo este tipo de actividad productiva genera territorios de despojo fronterizos en los que se materializan las relaciones de dominación ancladas espacialmente, como son la acumulación de la tierra, las malas condiciones laborales, la explotación de la mano de obra migrante indocumentada y la contaminación ambiental.

Palabras clave: 1. región fronteriza, 2. monocultivos, 3. migración, 4. Costa Rica, 5. Centroamérica.

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INTRODUCTION

Since the 1980s, the Costa Rican government has promoted the intensive production of pineapple as an alternative to non-traditional crops other than coffee and banana that could result in higher profits in the global market. With only 51,100 km^2, Costa Rica is currently the leading pineapple exporter worldwide. The constant expansion of this crop has been facilitated by different incentives provided by the Costa Rican State. Pineapple is grown mainly in the north of the country, near the border with Nicaragua, specifically in the cantons of Upala, Guatuso, and Los Chiles, which account for around 53% of national pineapple production (Rodríguez, Obando, & Acuña, 2018).

In the present article, we sought to demonstrate that from a concerning environmental and workforce exploitation perspective, agricultural extractivism is one of the tools of the capitalist and neoliberal development model. This model is based on the promotion of export monocultures and global agri-food chains; in this regard, the global circulation of fresh fruits and vegetables is growing exponentially, together with an intense concentration of distribution operators and a more pronounced emphasis on the participation of supermarket brands (Garrapa, 2017).

Transnational corporations use different strategies to control all stages of the process, that is, the strategic management of sales contracts, the management of agricultural technologies or seed patents, the possession of land, the mechanization of harvesting methods, labor contracting systems, etc. These relatively new mechanisms, associated with the intensification of liberal trade agreements in the early 1990s, are being deployed in every major agricultural region in the world since the so-called corporate food regime is presented as a vector of the global development project around the capitalist and transnational model of food production and distribution (McMichael, 2005).

This approach, in connection with the commodity system approach (Friedland, 2004), fueled intense debate since the end of the last century. Historical, economic, and social theories have challenged the role of the relationship between food production and consumption in the construction of a globalized economy (Dicken, 2007; Rastoin & Ghersi, 2010; Edelman, 2017), as well as the repercussions of these profound transformations in the production structure and the social organization of work.

On the other hand, the development model based on extractivism and monoculture also challenges territorial dynamics, which are usually ignored by academic studies. The present study adopts a production and distribution approach, excluding the discussion on consumption or food justice (Aubry & Kebir, 2013; Gottlieb & Joshi, 2010; Hochedez & Le Gall, 2016, among others). From a territorial standpoint, the specialized literature on global agribusiness has addressed different phenomena, for example, the multiple types of firms involved (Purseigle & Chouquer, 2013), the global/local relationship associated with intensive agriculture (González Chávez &

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Calleja Pinedo, 2017), the reconfiguration of entrepreneurial agriculture and rurality (Guibert, Bühler, & Requier-Desjardins, 2015), or territorial conflicts and claims arising from the violence of dispossession (Ojeda, Petzl, Quiroga, Rodríguez, & Rojas, 2015).

Therefore, in this article, we sought to contribute to the discussion on the territorial characteristics of export agriculture in a border region context as "spaces of opportunity" (Rodríguez, Obando, & Acuña, 2018) and to reflect on the role of this particular spatial configuration in the logics of exploitation of natural resources and labor force.

In the case of Costa Rica, export pineapple production is located in the northern part of the country, near the Nicaraguan border. We hypothesize that the presence of natural resources, flexible and cheap labor from Nicaragua and weak state control over the sector have been key factors in the expansion of this economic activity. We intend to demonstrate how this type of activity represents a development model based on the spatial asymmetry in the border, which results in different forms of dispossession and spatially anchored relations of domination.

This study is based on data from field visits to pineapple production areas in Costa Rica (2015-2018). Approximately 35 interviews were conducted with different actors associated with pineapple production, environmental conservation, and public institutions (municipalities, ministries, among others), as well as in the places of origin of Nicaraguan migrant laborers (2008-2014). The analysis is also based on a review of the literature on extractivism, relationships of domination in the production territories of global agriculture, and temporal mobility systems.

The article is structured as follows: The first section presents the dynamics of agricultural extractivism in pineapple production in Costa Rica, emphasizing the role of the State and the exploitation of resources by the global capital via local and regional development strategies taking place in the Nicaraguan border. The second part analyzes the role of cross-border movements of Nicaraguan day laborers who work in the sector and highlights the power relations behind the production mechanisms in the area, its asymmetry in the global context, and migratory movements.

Finally, the third section calls into question the global/local development model currently being promoted, which involves actors from spheres as diverse as resource distribution, environmental awareness, and labor exploitation.

Throughout the article, we will refer to a series of notions and theoretical discussions that allowed us to analyze and contextualize the social, economic, and spatial situations that we observed in the light of previous research that has studied the same problem in different geographical contexts. Our reflection will be continuously framed by critical studies on the exploitation of nature and labor and the border.

EXTRACTIVISM IN COSTA RICA, THE ROLE OF THE STATE AND THE EXPLOITATION OF RESOURCES BY THE GLOBAL CAPITAL

Extractivism in Central America

Quite often, the term extractivism is associated with two specific activities: oil extraction and mining. However, as pointed out by Gudynas (2013a), the definition of extractivism should include activities such as intense fishing and monocultures intended for export, such as pineapple, African oil palm, and banana in the case of Central America. All of these activities are characterized by the removal of large volumes of natural resources, of which at least 50% will be exported (Gudynas, 2013b, p. 4). These resources are often unprocessed or scarcely processed before their international sale and, in general, their role in local production circuits is small.

In Central America, most of these activities are carried out by companies supported by transnational capital in rural, peripheral, and border regions. Currently, there are 81 territorial defence conflicts derived from extractivism practices, 62% of them in Guatemala and Honduras (Bran-Guzmán, 2017).

The presence of extractive activities in the Central American border regions was confirmed during the study period, from 2015 to 2018. The Costa Rican border regions are complex scenarios where extractive activities, protected areas, and indigenous groups coexist. It should be added that most border areas of Central America present the same scenario, which has made these areas prone to tensions and ecological distribution conflicts (Martínez Alier, 2004). Indeed, the conflicts characterizing the study region are due to an unequal distribution of resources and environmental services, that is, the costs and benefits of an activity in which transnational corporations seize the benefits and local communities have to deal with the environmental and social costs of the exploitation.

We found an important lack of information on the impact and conflicts derived from monocultures in Central America. Monocultures are a “silent enemy” that grows unchecked; it is not perceived to be “as harmful as” mining or oil extraction, so its presence is often normalized, and it becomes part of the landscape.

The current form of extractivism in the Central American isthmus, especially in border regions, can be categorized as classic or conventional (Gudynas 2009, p. 187; 2013a, p. 8) because transnational corporations and private entrepreneurs are the primary exploiters and relegate the State to a secondary role. However, the role of the State is still decisive, since it often relinquishes its sovereignty in certain territories and, in many cases, acts as a partner or facilitator of these processes without assuming a truly redistributive or controlling role.

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Extractivism in Costa Rica: The Case of Monocultures in the North

The north of Costa Rica, in the province of Alajuela, includes the cantons of Upala, Guatuso, and Los Chiles, and it is affected by its proximity to Nicaragua as it is part of an axis of intense interaction with the Nicaraguan municipalities of San Carlos and Cárdenas. According to Girot and Granados (1997), this region is characterized by its cultural and economic proximity; the border has been historically porous and isolated from the national centers on both sides, which has facilitated the emergence of a shared identity reinforced by important commercial links and cross-border families (Morales-Gamboa, 2010). Indeed, these municipalities have very dynamic links and interdependent relationships, as well as a shared environmental system that encompasses a great diversity of ecosystems, such as tropical forests, rivers, aquifers, and wetlands, for example, the Caño Negro and Medio Queso wetlands (Rodríguez, 2014).

Most of the population on both sides of the border is composed of mestizo agricultural workers sharing cultural characteristics. The Malek indigenous group, one of the smallest in Costa Rica, is another part of the system; its territory is located in the canton of Guatuso, which covers 2,993 km^2, although, in the past, its territory included the south side of Lake Cocibolcaque, also known as Lake Nicaragua (Montoya-Greenheck, Carvajal, & Salas, 2008).

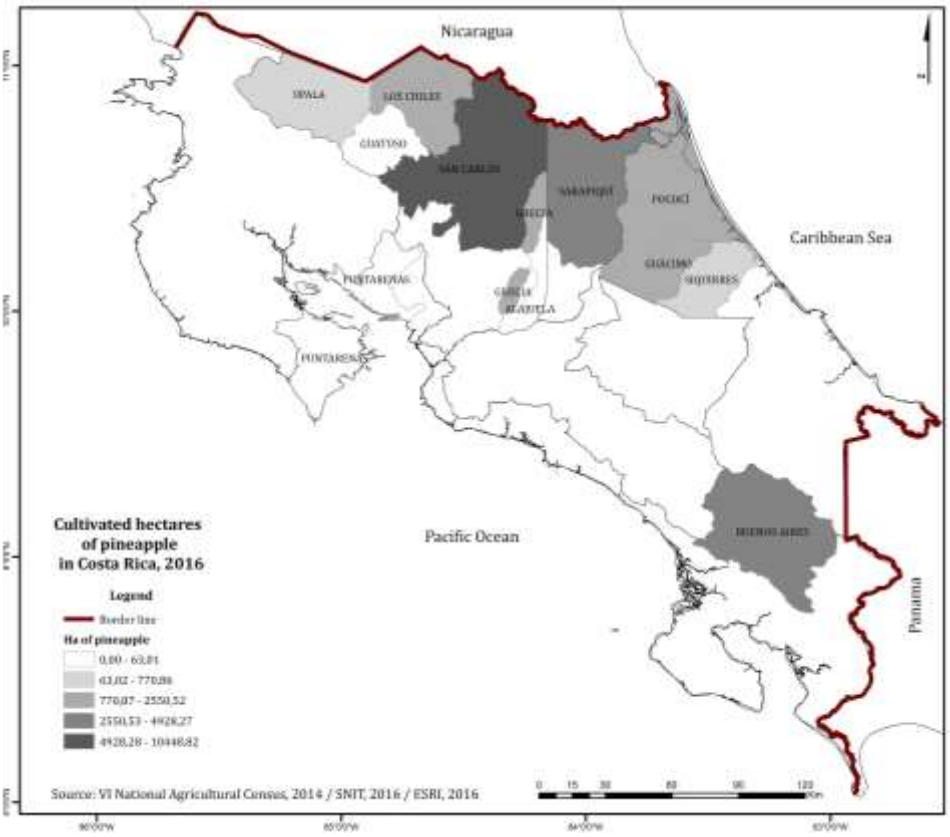
During the 1950s, the region was considered a critical pioneering front by the Costa Rican State (Castillo, 2006). The area was settled as a result of migratory and immigratory processes involving agricultural workers and indigenous populations from different parts of Costa Rica and Nicaragua (Acuña & Valverde, 2011, p. 7). However, due to their traditional agricultural exportation structure, these peripheral regions were included in the logic of State formation only when the agricultural border was saturated. Since the1980s, as a strategy, the Costa Rican State has been developing an agro-export model based on the production of pineapple, citrus fruits, and African oil palm monocultures (Granados & Jiménez, 2002, p. 202).

The Introduction of Pineapple in the North

The introduction of monocultures for export, especially pineapple, began in the 1980s when PINDECO (a subsidiary of Del Monte) began using a genetically modified pineapple strain called Sweet Golden M-12, as well as new technologies and production methods.

The expansion of pineapple cultivation in the north was fueled by a series of incentives[3] and benefits provided by the State. The distribution of pineapple production in Costa Rica is shown in Map 1.

Map 1. Hectares of Pineapple Production by Canton in Costa Rica, 2014



Source: National Institute of Statistics and Censuses (INEC, 2015).

We should highlight that the introduction of this model is part of structural adjustment programs aimed at liberalizing the economy and attracting foreign investment (León, 2015). Through these programs, the State progressively penetrated the dynamics of the region to promote and position the private sector and support the stimulation of new agricultural goods as monocultures. The strategy sought to transform this border area into a "living frontier," that is, to politically, economically, and culturally integrate it with the Costa Rican State (León, 2015). This new production structure opened the door to transnational corporations in the region, where these firms found optimal conditions (available land, water resources, peripheral situation, and migrant and Costa Rican labor) for the development of new agricultural products.

The atmosphere of economic openness contributed to the transformation of the predominant production structure in the north, adversely affecting the small and

[3]For example export contracts, certificates of tax installments, and free economic zones.

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medium-sized agricultural and stockbreeding economies. Non-traditional products such as pineapple and oranges become predominant in the region, displacing the production of basic grains (see table 1). However, despite the different agricultural activities and the incursion of transnational corporations and foreign capital, in terms of wealth distribution, the region has the lowest social development rates today, especially in the cantons of Upala, Los Chiles, and Guatuso (Zeballos, 2013), which are among the lowest-ranked in Costa Rica's Human Development Index.[4]

Table 1. Evolution of Hectares (1984 and 2014) Planted with Traditional as Opposed to Non-Traditional Products in the Province of Alajuela

Year	1984	2014
Traditional		
Bean	10,693	6,619
Maize	10,865	15,769
Non-traditional		
Orange	718	19,769
Pineapple	1,844	17,870

Source: Authors' own elaboration based on the 1984 National Agricultural and Livestock Census (*Dirección General de Estadísticas y Censos*, 1987) and the 6th National Census of Agriculture and Livestock, 2014 (INEC, 2015).

According to the Costa Rican Foreign Trade Promotion Agency (PROCOMER), in 2014, pineapple production generated total profits of around 865.1 million dollars, surpassed only by the 905.1 million dollars from banana production (PROCOMER, 2014).

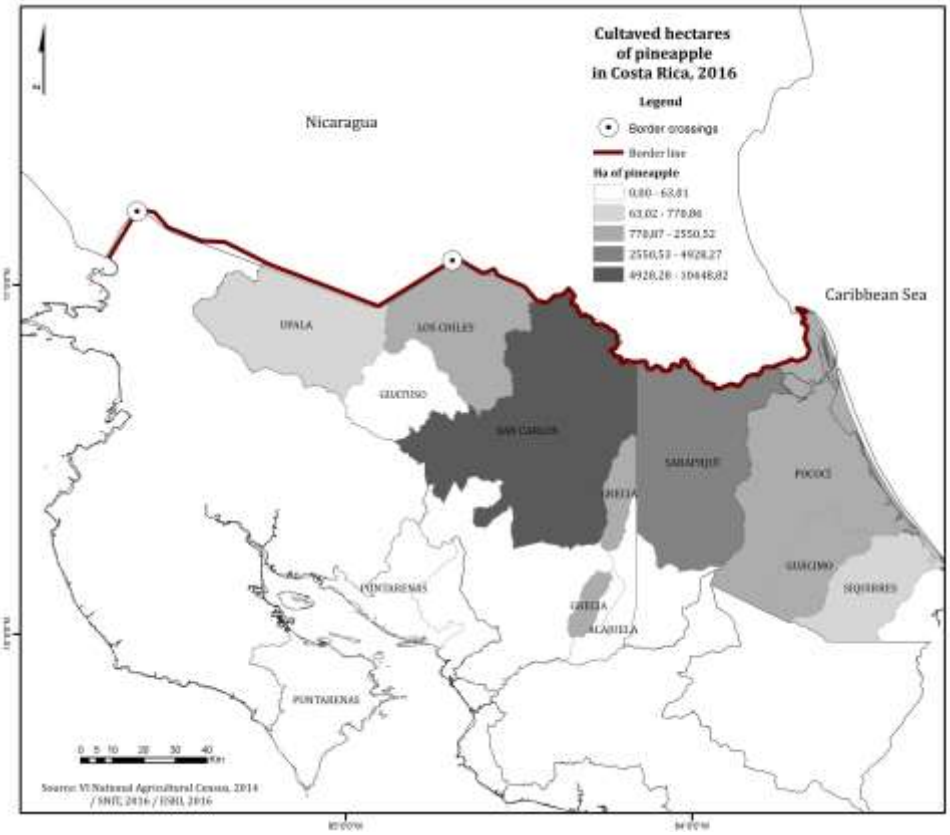
Estimates show that the population living in this border has grown 18.04% on the Costa Rican side between 2000 and 2007, and 38.31% on the Nicaraguan side (Cubero Acevedo & Soto Acosta, 2010, p. 39). This was due to the growth of pineapple production, which became a source of employment for both Costa Rican and Nicaraguan workers. Taking advantage of its location near the border, the new production structure used temporary Nicaraguan laborers to work in the pineapple fields. This migrant labor force is often irregular and unregistered, and it lacks social guarantees (Rodríguez, 2014).

Map 2 shows the proximity of the border to the cantons where pineapple is mainly produced and their border crossings points. The geography of pineapple plantations facilitates the flow of migrant labor. Although there are formal border crossings points

[4]Of the total of 80 cantons, Los Chiles has an HDI of 0.636 and occupies the 78th place, Upala has an HDI of 0.700 and is in the 68th place, and Guatuso has an IDH of 0.684 and occupies the 71st place. The national average of the HDI is 0.773 (PNUD & Universidad de Costa Rica, 2016).

in Los Chiles, there are many informal crossings points as well, being used daily by migrants and Nicaraguan nationals who work in the fields but live in Nicaragua.

Map 2. Border Cantons and Border Crossings



Source: National Institute of Statistics and Censuses (INEC, 2015).

Who are the Producers of Pineapple?

Costa Rica has become the leading pineapple producer in the world, with an estimated 45,000 to 58,000 hectares allocated to the activity in the national territory (Maglianesi-Sandoz, 2013), more than half of which are located in the northern border.

Small and medium-sized producers were identified in the border cantons of Los Chiles, Upala, and Guatuso; some are part of *Cooperativa Coopepiña*, while others are part of an association known as AsoNorte. Other national capital companies, such as *Upala Agrícola*, *Piña Pavón*, *Exportaciones Norteñas*, *Compañía Agropecuaria Las Brisas*, and *Finca 11*, among others, are mostly associated with the National Chamber of Pineapple Producers and Exporters (CANAPEP) (Rodríguez, Obando, & Acuña, 2018).

Although these structures secure the presence of small and medium-sized producers in the market, large companies are powerful enough to set the agenda, for instance, they have a much stronger influence on the CANAPEP (Obando, 2017) because small

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and medium-sized producers who own plots of around 5 to 10 hectares face legal and economic limitations in this regard. Many of these minor producers lack property titles, which prevents them from applying for loans or incentives, and the pineapple production chain is pyramid-shaped and exclusive: although almost all producers have access to the sowing, cultivation, and harvesting phases, the smaller producers lack the necessary resources to participate in the post-harvest and commercialization phases. These processes are monopolized by large companies that possess infrastructure, such as packing plants and can meet international export standards and certifications (Obando, 2017, p.88).

Since the 1980s, small and medium-sized producers have been progressively absorbed by large companies connected with the global market, which are not only monopolizing the land, but also State credits and aid, and their control of the production process guarantees them the largest share of profits (Obando, 2017, p.180). According to research carried out by the weekly newspaper *Semanario Universidad*, 96% of the pineapple is produced by 31 companies, and Del Monte produces more than half of the country's pineapples; 4% of small producers sell their product to large companies (Blanco Picado, 2013, s/n).

Today, large transnational corporations are the primary owners of the land. Small and medium-sized producers are gradually selling their land or leasing it since it is more profitable than small-scale pineapple or the production of basic grains. Between 1987 and 1995, the percentage of agricultural worker families decreased from 20.7% to 11.5% in the country; this decrease translates into the disappearance of small producers and the increase in wage labor and temporary work in larger farms, usually run by "transnational agro-industrial conglomerates" (Acuña, 2019).

Large-scale farms are currently the main source of employment in the region, and they are also responsible for much of the pollution (Blanco Picado, 2013). The interviews and participant observation carried out in meetings with actors opposing the expansion of monoculture pineapple in the north allowed to confirm that, for these actors, the most important socio-environmental conflict is precisely the extensive cultivation of pineapple.

According to interviews carried out in 2015 with members of the *Asociación de Acueductos y Alcantarillados* (ASADA) of Pavón in the Los Chiles canton, as well as other organized groups in the border districts of Nueva Esperanza and Caño Negro in Costa Rica, there are substantial concerns about social and environmental justice. Specifically, concerning corporate accumulation of land, displacement of agricultural worker families; loss of woodlands; the presence of a pineapple-related fruit fly that affects livestock; the constant burning of old plantations in preparation for new ones, and the potential contamination of drinking water sources.

Extractivism and the Border in Central America

The border is much more than a form of discontinuity and organization of political space: the border is a natural (Fourny, 2005) and social region with particular characteristics due to its location, which makes it different from the rest of the national territory. The present study regards the border as a dynamic region comprising territories divided by a boundary but connected by a series of exchanges and power relations that link a wide range of actors, ecosystems, and production activities (Rodríguez, 2014). These geographical spaces are known as cross-border regions, and they consist of two spaces located in different countries that nevertheless share a series of dynamics (Newman, 2011).

Central American borders are characterized by being scarcely populated since the Isthmus population is concentrated in urban centers located on the Pacific coast (Rodríguez, 2014). Authors such as Debarbieux (2005) refer to the borders as "human deserts" or "no man's land" due to the difficulty of accessing them, their lack of investment, and the weak presence of the State. Foucher (1991) points out that sparsely populated border regions are usually poorly monitored. This isolation increased during the armed conflicts of the 1980s when the borders of the Central American Isthmus became the scene of numerous confrontations and forced people displacements; as a result, the borders began to be perceived as dangerous and inaccessible zones.

The presence of monocultures in these regions is not recent. Since the 19th century, exogenous actors, such as colonial empires (Great Britain) or American transnational corporations (e.g., the United Fruit Company) installed plantation systems in the form of enclaves (Girot & Granados, 1997). Thus, the lack of State investment, infrastructure, and even presence facilitated the establishment of monoculture production systems (banana, pineapple, and African oil palm) in these regions without due land-use planning, which endangered natural resources such as aquifers, watersheds, and wetlands (Lavell, 2004; Aravena, 2005).

The Central American borders represent ideal sites for the establishment of extractive activities (monocultures, mining, and oil extraction); this is how these forsaken lands became extractive enclaves associated with global markets but isolated from national centers (Gudynas, 2009).

The Agro-Export Model: Dispossession and Accumulation of Land

The State and its institutions are responsible for regulating and controlling the expansion of pineapple production in the country; however, they are unaware of the total cultivated hectares, as these vary depending on the institution consulted (Rodríguez, Obando, & Acuña, 2018). According to a study by the Monitoring System for Land Use Change in Production Landscapes Associated with Tenure (MOCUPP),

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satellite imagery revealed that as much as 58,000 hectares were being used for pineapple production in 2016, a five-fold increase with respect to the 11,000 hectares registered in 2000; these figures are far from those reported by the 6th Agricultural and Livestock Census in 2014. The inaccuracy of this information highlights the poor planning and control of monoculture expansion in Costa Rica. The lack of data increases at the canton level: local governments have failed to register the number of hectares, farms, or companies associated with this activity in their territory. The Los Chiles and Upala cantons lack regulatory plans, which are vital to determine the areas where crops can or cannot be expanded.

Therefore, the State has had a fundamental role in the appropriation of natural resources; their actions or lack of intervention facilitates the extraction and exploitation of nature and exerts a negative impact on the environment and society. The introduction of monocultures in the country was not only the result of the economic interests of transnational corporations, but it also required the participation and complicity of the Costa Rican State, which invested in infrastructure and research to position the crop (Avendaño, Ramírez, & Segura, 2014). As described by Osorio (2014), the state apparatus as such, composed of public officials (city mayors, ministers, middle managers, among others), is far from unbiased: the actions of these officials respond to the holders of power, who guide their interventions and decisions (Osorio, 2014).

The political project for the promotion of this model, based on the unregulated expansion of monocultures, has been profitable for companies and the agro-export sector, but not for rural communities, who must assume the economic, social, and environmental costs of this form of production (Rodríguez, Obando, & Acuña, 2018).

For example, pineapple production activities are exempt from taxation and considerably subsidized; thus, benefits for the country other than new jobs are minimal (Rodríguez, Obando, & Acuña, 2018). During the fieldwork carried out for the present study, when agricultural workers, producers, and activists were asked what benefits they obtained from pineapple production, the most common response was: “We do not make a profit from it.” The documentary “Costa Rica pura piña,” produced by the Era Verde show, on University of Costa Rica’s Channel 15, explains that 43% of the selling price of pineapple goes to the European supermarket selling the product, the 22.3% correspond to the cost of transportation and the payment of tariffs, 25% is for production expenses, and a 9.3% goes to workers.

The government’s discourse is that these companies are an indispensable source of employment for the impoverished villages in the region; however, the type of employment provided by the companies is considered as “precarious” by the interviewees: low wages, long working hours, and the use of illegal migrant labor who earn around 5,000 colones a day, or eight dollars according to the exchange rate in January 2019.

WORKFORCE MOBILITY, A KEY RESOURCE FOR GLOBAL AGRICULTURE

Highly financialized and intensive agriculture operates on the basis of logical organization and evolution of globalized productive territories, at the same time, it depends on the adaptability of a highly specialized and flexible workforce. On the one hand, the reticular arrangement of the enclaves territories is the primary driver of mobility and migratory circulation; on the other hand, the migrant workforce adapts to the cartography of the agricultural sector, creating new spatial arrangements.

Approximately 7% of the population in Costa Rica is estimated to be composed of immigrants, most of whom (more than 75%) are Nicaraguans (IOM, 2011). Agriculture is the primary employment sector for Nicaraguan migrants (one quarter), followed by domestic service, retail commerce, and construction (Baumeister, 2017; Morales Gamboa, 2008). It is an old and structured migratory field rooted in the 19th century, along with the historical labor needs of the coffee, sugar cane, or banana agricultural enclaves. Circular migration and temporary mobility practices are, therefore, very characteristic of this border; the South-South flow is completely articulated with the production and territory exploitation dynamics of natural resources and regionally available workforce.

The Costa Rican-Nicaragua Pair in the Geopolitics of Intensive Agriculture: The Relationship Between Global Production Logics and Labor Circulation

As stated in the first section of the present article, when it comes to the management of natural and territorial resources on a global scale, intensive agriculture acquires a different form. This section will describe that intensive agriculture also has an impact on wage labor management. In this context, labor is characterized by short temporary contracts, outsourcing schemes, and flexible contracting rules and working conditions. There is a long list of factors to justify the need to play with the salaries of the labor force; the only adjustment variables left for employers and investors seeking to survive in the context of intense competition that prevails in global agro-industry chains are input costs, seeds used, or credits. Moreover, large commercialization and distribution actors can offer very low prices.

In addition to the low wages paid to workers, the employment model is markedly temporary, and a pattern of reproduction of living conditions can be observed. As a "migratory program" (Morice & Michalon, 2009, p.16), circulation is presented as the only viable option for the global economy and its flexible dynamics.

The notion of "migration movement," conceived and developed to emphasize the mobility strategies of actors and commercial or symbolic circulation territories (Tarrius, 1992; Dorai, Hily, Loyer, & Ma Mung, 1998), has been used by international organizations (such as the International Organization for Migration, the International

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Labour Organization, the World Bank) and governments in countries of origin and destination. Workforce mobility is often framed as a mechanism that benefits everyone and allows for a win-win-win logic (Décosse, 2011); in a context of labor market stress, the country of origin is provided a relief valve, and due to the temporary presence of the workforce in the country of destination, specific corporate demands can be met while public opinion remains clear from perceived economic or cultural threats, and finally, migrants can sustain their families thanks to this temporary salary.

In the final analysis, this device is a "threat into forced mobility" (Morice & Michalon, 2009, p.16), as a form of "bridled wage labor" (Moulier-Boutang, 1998) that have been frequently associated with Brass's (2011) definition of "non-free labor": a type of workforce exploitation intrinsically related to mature capitalism. These are labor dynamics that limit and, most of all, control—according to specific needs—the possibilities of mobility both socially and spatially, through different domination mechanisms: economic pressure, lack of respect for labor law, taking advantage of a severely impoverished workforce, or irregular migration, among others.

The migrant workforce enters the global labor market within a flexible scheme where spatial logics and social and economic norms are uncertain; as a result, the workforce is forcibly assimilated by the dynamics of territorial complementarity. Export pineapple production is a paramount example of these global mechanisms involving transnational capital, free market, and the importation of wage labor for short periods, in this case from Nicaragua, into labor markets segmented by on nationality, gender, and social class.

Enclave logics present traces of the colonial heritage inscribed in the social and economic space. At the same time, they reveal the new force relationships at play in the intensive agriculture sector and the close links between globalization and socioeconomic regulations (Avallone, 2017; Moraes, Gadea, Pedreño, & de Castro, 2012). Discussions on agricultural extractivism often refer to the predatory nature of monocultures in terms of land accumulation, environmental damage, water, and soil pollution. However, it is also essential to focus on the territorial dynamics resulting from monocultures, especially in agricultural enclave spaces and temporary migration flows. The "production of space," as conceived by Lefebvre (1974), regards space as a social product that constitutes, at the same time as a means of production, a means of control, and therefore, a vehicle for domination and power (Martin, 2006).

Three major categories of linked dynamics have a substantial impact on rural areas in Central America and characterize the relations of domination in agro-food chains:

1. The tendency to intensify and specialize production lands and production chains, quite conspicuous in the case of pineapples.

2. The multiplication of actors involved in the production process and the emergence of hierarchies among them: production and distribution transnationals, wholesalers, national companies, small producers, and cooperatives, among others.

3. New forms of social organization of production resulting from the different strategies corporate agriculture has to exploit the temporary workforce.

Given the ever more specialized production and commercialization needs, the border represents a space of opportunity: it guarantees the availability of a sufficient amount of workforce that provides quality derived from the experience and skills developed by workers on both sides of the border. The location and concentration of export productions derive largely from the recruitment policies established according to the specific needs of production as expressed by the multiple actors who organize the seasonal labor market.

Circulations, Anchors, and Territorial Experiences. The Production of Space by Groups of Cross-Border Migrant Day Laborers

The relationships between the strength of the agricultural labor market and the production of asymmetric spaces can be analyzed from critical geography, which provides approaches and tools to read social inequalities and power relations, especially their territorial expressions. Although the issue of production relations as elements of domination, control, and power has been widely studied and discussed in the context of urban dynamics and "the right to the city" (Lefebvre, 1986; Harvey, 2010), the issue remains unanswered for other types of spaces, especially those in rural areas, where intensive and traditional agriculture collide.

In the case of spaces where capital and workforce associated with the agro-industry are present can allow us to highlight and spatialize the relations of domination inherent to labor markets and agricultural enclave territories.

An analysis of "globalization in rural spaces" (Guibert, Bühler, & Requier-Desjardins, 2015) reveals the emergence of new systems related to work management and social organization. This phenomenon cannot be dissociated from migration flows, their temporalities, and associated development models. Increasingly complex migration movements of circularity, reversibility, itinerancy, or, on the contrary, of settlement, albeit temporary, as well as multiple forms of anchoring, were observed in all the regions where intensive agriculture is carried out in the studied region.

In this regard, Herod's (1997) labor geography perspective can be used for the analysis of the socio-productive and migration contexts in the region. Similarly, Marx's economic geography and the notion of spatial fix allow for the analysis of the spatial ideology of capitalism as a system based on a method that is infinitely repeated: that of

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solving crises by seeking solutions in other spaces (the term *fix* carries the sense of spatial location, but also of provisional solution).

Thus, the global agricultural sector operates based on high-technology activities that prey on geographical spaces, natural resources, and labor. On this basis, the role of the migrant agricultural worker as an exploited actor is underscored. The concept of labor's spatial fix proposes that it is labor, and not only capital, that draws, through its actions, the geography of capitalism and the organization of territories in globalized economies (Herod, 1997; Castree, 2007; Mitchell, 2011; Zeneidi, 2013).

Since the 1990s, an epistemological turn in the social sciences has placed the migrant social actor at the center of the analysis. The actor's point of view, migratory project, mobility practices, types of appropriation of places, and experiences in different sites highlight the possibilities of emancipation or autonomy available to the migrant. The notions of "migratory circulation" (Prothero & Chapman, 1985; Dorai, *et al.*, 1998; Faret, 2003; Baby-Collin, Cortes, Faret, & Sassone, 2009) or "circulatory territories" (Tarrius, 1992; Simon, 2006) place the focus on the actors and their capacity to appropriate different spaces in migratory systems within the framework of individual, family, or community logics.

This approach to migration movements has been criticized or, at least, challenged by approaches that emphasize the coercion, restraint, or enforcement of mobility by family frameworks, national borders, migration policies, socio-cultural structures, or labor markets (Mezzadra & Neilson, 2013; Molinero, Serrano, Moreno, & Gracia, 2017; Décosse, 2011).

In the Costa Rican-Nicaraguan cross-border territories, the border –national, but also economic, cultural, or social– stands as a strong barrier, an obstacle, and an area of violence for migrants seeking to cross it. At the same time, it is considered as an region that produces new subjectivities, that has a strong potential to create conflicts, and is embedded in the construction of asymmetrical social relationships. The whole scope of the actors' reactions and their strategies aimed at organizing family reproduction, as well as taking advantage of economic, social, and spatial opportunities, or finding alternatives to the captive labor market, are essential for the production of space.

The spatial configurations expressed around the agricultural sector and the enclaves of globalized production should be understood by taking into account the realities of dispersion and discontinuity, but also the importance of the structuring process and relational organization of mobility territories; such views have fueled reflections on "multi-located" spaces (Cortes & Pesche, 2013), some of them focused on cases from the Mediterranean, South, and Central America. Agricultural workers build territorialities between different living and working spaces, and their movements are

governed by the temporary nature of their work and the exploitation conditions inherent to the export agriculture sector.

In their places of origin, the workforce is in charge of its rural family economy and local production for subsistence; however, in a system where workers regularly come and go between their hometowns and the sizeable agricultural extraction fields (Michel, Prunier, & Faret, 2011; Prunier, 2016a, 2013), a category of people remain in constant movement. These particularly flexible day laborers trace their mobility trajectories without considering a return to their place of origin, limited by the job offers at the different fields or in other activity sectors. In Central America, megaprojects in construction or tourism, for instance, have logics quite similar to those in the primary sector to control labor mobility and the production of territorial enclaves (Morales Gamboa, Kandel, Ortiz, Díaz, & Acuña, 2011).

FINAL THOUGHTS: MIGRATION, BORDERS, AND EXTRACTIVISM: WHAT DEVELOPMENT MODEL IS PROMOTED?

The northern Costa Rican border region is marked by the expansion of monocultures and the presence of dispossession, exclusion, and environmental inequality processes. The present study allowed us to describe how monoculture expansion is taking place without true state control. The repercussions of these activities affect not only the environment but also the health of the inhabitants and the regional migration system.

Ojeda *et al.* (2015) point out that these tensions produce "landscapes of everyday dispossession." Concretely, the authors refer to these territories as political projects, that is, inconclusive and power-saturated processes that materialize in concrete assemblies of nature and society that constitute sedimented evidence of historical processes marked by inequality, death, and suffering that have accumulated in the space (Ojeda *et al.*, 2015, p. 109). Although this process is not recent—it dates from the conformation of the Costa Rican State—we can identify three phenomena that have intensified these processes in parallel with the expansion of pineapple monoculture:

Land Accumulation, Loss Of Rural Culture, and Indigenous Agriculture

In Central America, extractive activities such as the export agro-industry lead to tension between agro-industrial companies seeking to accumulate land and traditional agricultural workers or indigenous communities, who are threatened by dispossession. Due to their extensive and expansive logic, monocultures exert pressure on the local geography, depriving communities of the land, water, and woodlands. These dispossession processes result in socio-environmental, agrarian, and labor conflicts.

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Dispossession processes are complex; as stated by Cáceres (2015), dispossession occurs as a consequence of the land accumulation process (Harvey, 2005) in a given territory, where power relationships develop among actors around access to specific resources. Access to and control over these resources is not a natural occurrence but a process of constant tension, conflict, and inequality among the various actors. One of the most visible forms of dispossession caused by the expansion of monocultures and land accumulation is the detachment of agricultural worker families from their land or their natural form of subsistence production activity.

Pollution and Appropriation of Nature

The indiscriminate use of agrochemicals and waste mismanagement has important impacts on aquifers and human health. According to studies by the National University of Costa Rica's Regional Institute for Studies on Toxic Substances (IRET), pineapple cultivation requires around 45 kg of agrochemicals per cultivated hectare (Ramírez, Bravo, & de la Cruz, 2012). Usually the most common are bromacil, diuron, paraquat (herbicides), as well as fungicides such as triadimefon, among others.

The agricultural frontier is also under pressure due to deforestation and wetland dredging required by monoculture activities (Maglianesi-Sandoz, 2013, p. 66). The absence of state regulation, lack of territorial order, low or null taxation from these production activities, and excessive corporate transnationalization of extractivism are factors that facilitate the overall process.

Through the use of satellite imagery and terrain measurements by the MOCUPP under the supervision of the United Nations Development Programme (UNDP) and state institutions, it was confirmed that forest cover has decreased considerably at the expense of pineapple production. A total of 5,568.93 woodland hectares were lost to pineapple production from 2000 to 2015, mostly in the north, where 3,192.70 forest hectares have disappeared (Araya, 2017).

In addition, according to research carried out by the Research Center for Environmental Pollution at the University of Costa Rica (CICA), the bromacil used in pineapple fields contaminates both aquifers and land; after the departure of the companies, it would take more than 20 years for the land to desegregate the agrochemicals and become arable again (Córdoba, 2013).

Labor Exploitation and the Mobile Workforce in Circulatory Territories

Although exploitation and labor vulnerability are a reality for most Costa Rican agricultural workers, the temporary use of labor, especially migrant labor, is key in the intensive agriculture sector. Therefore, as stated in our hypothesis, the development model based on intensive export production in national border areas is closely

associated with the living and working conditions and the reproduction of the workforce required by the model. Questions arise as to the local and global benefits and impacts of such a development scheme: What happens in the places of origin of the day laborer? How does the rural family economy work in Nicaragua, where dependency and poverty are commonplace? (Prunier, 2016b).

Although Central America is very often depicted as a peripheral region in the globalized system, current production, social, economic, and migratory processes clearly show that space is undoubtedly governed by the asymmetric logic of global capitalism and territorial competitiveness mechanisms; in this context, the border plays the role of comparative advantage. Moreover, the linkage between agricultural extractivism, the connection with the global agri-food system and workforce mobility are characteristic of a development model that challenges the global/local relationship while promoting a sacrificial discourse (Gudynas, 2013a): the assertion that these communities must be "sacrificed" and that they must endure the socio-environmental impact in order to secure employment and the "common good," either of the country (increase in exports) or their families' (survival wages).

Translation: Miguel Ángel Ríos Flores

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